

This listing of claims will replace all prior versions and listings of claims in the Application.

LISTING OF CLAIMS

1. ***(Previously Presented)*** A computer implemented method for evaluating a user's information technology skills by having the user complete an examination comprising:

presenting one or more examination items to the user, wherein the examination items include a practical exercise and at least one of a multiple choice question and an essay question; associating one or more virtual machines with the practical exercise; displaying to the user information that is associated with the practical exercise, wherein the information describes a task that the user is instructed to complete, and wherein the user uses one or more of the virtual machines to complete the task; and

launching the one or more virtual machines so that the user can use the virtual machines to perform the task, wherein the one or more virtual machines are configured to run an operating system.

2. ***(Original)*** The method of claim 1, further comprising:

setting a timer to expire after a certain amount of time has elapsed; waiting for the user to complete the practical exercise and/or for the timer to expire; and evaluating how well the user performed the practical exercise.

3. ***(Previously Presented)*** The method of claim 2, wherein the act of evaluating how well the user performed the practical exercise comprises examining the state into which the user put one of the one or more virtual machines and comparing the state to a benchmark.

4. ***(Previously Presented)*** The method of claim 2, wherein each of the virtual machines comprises a disk image file, and the task requires the user to modify a particular file stored within one of the disk image files.

5. **(Original)** The method of claim 4, wherein the act of evaluating how well the user performed the practical exercise comprises examining the modifications made to the particular file to determine whether the particular file was modified correctly.

6. **(Previously Presented)** A computer implemented method for evaluating a user's information technology skills, comprising:

accessing a test file comprising one or more exam items;
presenting one or more exam items to the user, wherein the examination items include at least one of a practical exercise, a multiple choice question, and an essay question;
selecting one of the one or more exam items;
determining whether the selected exam item is a practical exercise; and
presenting the selected exam item to the user, wherein, if the selected exam item is determined to be a practical exercise, then the act of presenting the selected exam item to the user comprises launching one or more virtual machines that are configured to run an operating system and are associated with the practical exercise, and, if the selected exam item is determined to be at least one of a multiple choice question and an essay question, presenting the exam item to the user and waiting for a user response.

7. **(Original)** The method of claim 6, further comprising:

setting a timer to expire after a certain amount of time has elapsed;
waiting for the user to complete the exercise and/or for the timer to expire; and
evaluating how well the user performed the practical exercise.

8. **(Previously Presented)** The method of claim 6, wherein, if the selected exam item is determined to correspond to the practical exercise, then the act of presenting the selected exam item to the user further comprises displaying to the user information that is associated with the practical exercise, wherein the information describes a task associated with the exercise that the user is instructed to perform.

9. *(Previously Presented)* The method of claim 7, wherein each of the one or more virtual machines comprises a disk image file, and the task requires the user to modify a particular file stored within one of the one or more disk image files.

10. *(Original)* The method of claim 9, wherein the act of evaluating how well the user performed the practical exercise comprises examining the modifications made to the particular file to determine whether the particular file was modified correctly.

11. *(Original)* The method of claim 9, wherein the act of evaluating how well the user performed the practical exercise comprises examining a file that the was not supposed to be modified in performing the practical exercise.

12. *(Previously Presented)* An information technology skills evaluation system, comprising:

 a storage medium;

 a first software application stored on the storage medium for allowing multiple virtual machines to run on a single computer system, wherein the virtual machines are configured to run an operating system;

 a second software application stored on the storage medium and configured to present one or more exam items to a user, wherein the exam items include a practical exercise and at least one of a multiple choice question and an essay question;

 a disk image file stored on the storage medium, the disk image file being associated with a virtual machine that is associated with the practical exercise; and

 a processor for executing the first and second software applications, wherein the second software application is operable to:

 display to the user information that is associated with the practical exercise, wherein the information describes a task associated with the practical exercise; and

 launch the virtual machine so that the user can use the virtual machine to perform the task.

13. **(Original)** The system of claim 12, wherein the second software application is further operable to:

set at timer to expire after a certain amount of time has elapsed;
wait for the user to complete the practical exercise and/or for the timer to expire; and
evaluate how well the user performed the practical exercise.

14. **(Original)** The system of claim 12, wherein the second software application comprises a test driver and a practical skills testing module (PSTM).

15. **(Previously Presented)** The system of claim 14, wherein the test driver is operable to:

read a test file that comprises the one or more exam items;
select an exam item;
determine whether the selected exam item is associated with the practical exercise;
provide an exam item identifier to the PSTM if it is determined that the exam item is associated with a practical exercise, wherein the exam item identifier identifies the selected exam item; and
wait for a response from the PSTM after providing the exam item identifier to the PSTM.

16. **(Original)** The system of claim 14, wherein the second software application displays the virtual machine in a testing window provided by the test driver.

17. **(Previously Presented)** An information technology (IT) skills evaluation system for evaluating a user's IT skills, comprising:

a test file comprising one or more exam item, wherein the one or more exam items include a practical exercise and at least one of a multiple choice question and an essay question, and wherein the practical exercise is associated with one or more virtual machines;

an exam item presenter that presents the one or more exam items to the user, wherein the exam item presenter comprises a virtual machine launcher that launches the one or more virtual machines when the practical exercise is presented to the user, wherein the one or more virtual machines are configured to run an operating system; and

an exercise evaluator that evaluates how well the user performed the practical exercise.

18. **(Original)** The system of claim 17, further comprising a storage medium that stores a disk image file for each of the one or more virtual machines.

19. **(Original)** The system of claim 18, wherein the exercise evaluator evaluates how well the user performed the practical exercise by examining at least one of the disk image files.

20. **(Original)** The system of claim 19, wherein in examining the at least one disk image file the evaluator checks a predetermined file stored within the disk image file to determine whether the user modified the file correctly.

21. **(Previously Presented)** A computer program product for evaluating a user's information technology skills by having the user complete an examination, the computer program product being embodied in a computer readable medium and comprising computer instructions for:

presenting one or more examination items to the user, wherein the examination items include a practical exercise and at least one of a multiple choice question and an essay question;

associating one or more virtual machines with the practical exercise;

displaying to the user information that is associated with the practical exercise, wherein the information describes a task that the user is instructed to complete, and wherein the user uses one or more of the virtual machines to complete the task; and

launching the one or more virtual machines so that the user can use the virtual machines to perform the task, wherein the one or more virtual machines are configured to run an operating system.

22. **(Original)** The computer program product of claim 21, further comprising computer instructions for:

setting a timer to expire after a certain amount of time has elapsed;

waiting for the user to complete the practical exercise and/or for the timer to expire; and

evaluating how well the user performed the practical exercise.

23. *(Previously Presented)* The computer program product of claim 22, wherein the computer instructions for evaluating how well the user performed the practical exercise comprises computer instructions for examining the state into which the user put one of the one or more virtual machines and comparing the state to a benchmark.

24. *(Previously Presented)* The computer program product of claim 22, wherein each of the virtual machines comprises a disk image file, and the task requires the user to modify a particular file stored within one of the disk image files.

25. *(Original)* The computer program product of claim 24, wherein the act of evaluating how well the user performed the practical exercise comprises computer instructions for examining the modifications made to the particular file to determine whether the particular file was modified correctly.

26. *(Previously Presented)* A computer program product for evaluating a user's information technology skills, the computer program product being embodied in a computer readable medium and comprising computer instructions for:

- accessing a test file comprising one or more exam items;
- presenting one or more exam items to the user, wherein the exam items include at least one of a practical exercise, a multiple choice question, and an essay question;
- selecting one of the one or more exam items;
- determining whether the selected exam item is a practical exercise; and
- presenting the selected exam item to the user, wherein, if the selected exam item is determined to be a practical exercise, then the act of presenting the selected exam item to the user comprises launching one or more virtual machines that are configured to run an operating system and are associated with the practical exercise, and, if the selected exam item is determined to be at least one of a multiple choice question and an essay question, presenting the exam item to the user and waiting for a user response.

27. **(Original)** The computer program product of claim 26, further comprising computer instructions for:

setting a timer to expire after a certain amount of time has elapsed;
waiting for the user to complete the exercise and/or for the timer to expire; and
evaluating how well the user performed the practical exercise.

28. **(Previously Presented)** The computer program product of claim 27, wherein, if the selected exam item is determined to correspond to the practical exercise, then the act of presenting the selected exam item to the user further comprises displaying to the user information that is associated with the practical exercise, wherein the information describes a task associated with the practical exercise that the user is instructed to perform.

29. **(Original)** The computer program product of claim 26, wherein each of the one or more virtual machines comprises a disk image file, and the task requires the user to modify a particular file stored within one of the one or more disk image files, and wherein the computer instructions for evaluating how well the user performed the practical exercise comprises computer instructions for examining the modifications made to the particular file to determine whether the particular file was modified correctly.

30. **(Original)** The computer program product of claim 29, wherein the act of evaluating how well the user performed the practical exercise comprises examining a file that the was not supposed to be modified in performing the practical exercise.

31. **(Previously Presented)** The method of claim 1, wherein the one or more virtual machines are selected from a plurality of virtual machines.

32. **(Previously Presented)** The method of claim 1, wherein the one or more virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

33. ***(Previously Presented)*** The method of claim 6, wherein the one or more virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

34. ***(Previously Presented)*** The system of claim 12, wherein the virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

35. ***(Previously Presented)*** The system of claim 17, wherein the one or more virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

36. ***(Previously Presented)*** The computer program product of claim 21, wherein the one or more virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

37. ***(Previously Presented)*** The computer program product of claim 21, wherein the one or more virtual machines are selected from a plurality of virtual machines.

38. ***(Previously Presented)*** The computer program product of claim 26, wherein the one or more virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.